

Submission to the Productivity Commission

Regulation of Agriculture: Draft Report



EDOs of Australia

Productivity Commission
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By email: agriculture@pc.gov.au

Dear Commissioners,

Thank you for the opportunity to comment on the *Regulation of Agriculture: Draft Report (Draft Report)*. EDOs of Australia (**EDOA**) maintain the views outlined in our submission to the Issues Paper, and wish to make some brief comments responding to the specific findings and recommendations in the Draft Report regarding native vegetation clearing.

We also identify a gap in relation to environmental data, ecosystem services and environmental accounts, and submit that the Draft Report does not sufficiently consider future challenges that agricultural regulation must address, adapt and respond to regarding climate change mitigation and adaptation.

In addition to the brief comments made below, we wish to draw the Commission's attention to a number of relevant, detailed submissions and reports released since the earlier Issues Paper, including:

- EDOA submission to the parliamentary inquiry into the operation of the 'water trigger' under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*
- EDO NSW package of submissions to the review of NSW Biodiversity Laws:
 - [Biodiversity Conservation Bill 2016](#)
 - [Local Land Services Amendment Bill 2016](#)
 - [Technical submission on the Biodiversity Assessment Method and Mapping Method 2016](#)
- The Queensland government's [Statewide Land cover and Trees Study \(SLATS\)](#) report for 2014-2015, recording 296,000ha of woody vegetation clearance across the state, 91% of which was replaced with pasture and over 100,000ha of which was within catchments draining into the Great Barrier Reef. The clearing was nearly twice the volume of clearing recorded in 2011-2012.
- EDO Qld submission on the [Vegetation Management \(Reinstatement\) and Other Legislation Amendment Bill 2016](#) (Qld) – this legislation failed to pass in a parliamentary vote on 19 August 2016.
- EDO Qld submission on the [independent review by Cardno into the self-assessable vegetation clearing codes](#)
- EDO Tasmania submission regarding the [draft State Planning Provisions](#) (of particular relevance is the exemption of agricultural land from the application of the Natural Assets Code)
- [Deferment of the commencement of restrictions on broadscale clearing](#) under Tasmania's *Permanent Native Forest Estate Policy* until 1 July 2017
- The [Society of Conservation Biologists Oceania open letter](#) from 500 scientists identifying land clearing as a significant cause of biodiversity loss and calling on Australian governments (particularly those of Qld and NSW) to increase protections against land clearing
- [Decision by the Federal Department of Environment](#) to issue warrants to freeze clearing to be undertaken under over six state permits to clear vegetation in Queensland subject to their investigation by the Department as to whether assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) is necessary.

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The examples provided in our initial submission, and the further reports outlined above, offer strong evidence that the current legal frameworks are not providing adequate protection for native vegetation and biodiversity. A recent international analysis examining impacts on threatened species in five countries, including Australia, found that agricultural activity and overexploitation (for example, forest harvesting) continue to be the principal drivers of extinction.¹

A letter published in the Sydney Morning Herald on 16 August 2016 by Associate Professor Martine Maron and Professor Carla Catterall², in response to calls from AgForce for evidence of the need for the vegetation clearing reforms currently proposed in Queensland, highlights the “overwhelming scientific consensus” on the need for stronger laws to “reduce the burgeoning rate of land clearing across eastern Australia.”

There is also broad community support for environmental regulations that provide effective measures for biodiversity conservation. For example, in response to proposed reforms to “streamline” New South Wales’ biodiversity laws, EDO NSW held a series of events and consultations, speaking with over 600 stakeholders from local communities, Landcare groups, Local Land Services officers, local councils, ecological consultants, private land conservation agreement holders, Aboriginal people, conservationists, wildlife carers, and individuals across the Hunter, Greater Sydney, North Coast, Northern Tablelands, South East and Central West regions. With the exception of representatives of the NSW Farmers Association, none of the stakeholders saw the proposals as an improvement and many expressed serious concern that the proposed laws would weaken existing protections.

This submission comments on Recommendations 3.1, 3.2 and 3.3.

COMMISSION’S DRAFT RECOMMENDATION 3.1

The Australian, state and territory governments, in consultation with natural resource management organisations, should ensure that native vegetation and biodiversity conservation regulations:

- are risk based (so that landholders’ obligations are proportionate to the impacts of their proposed actions)
- rely on assessments at the landscape scale, not just at the individual property scale
- consistently consider and balance economic, social and environmental factors.

Risk-based regulation

In 2013, Lindsay and Riebl³ noted:

Applying “best practice” models to the conception and calculation of risk in [environmental regulation] is a valid exercise when it is done thoroughly, appropriately and not for the ulterior purposes of achieving primarily economic benefit rather than environmental benefit. Providing for clear articulation of environmental benefits and protections in risk-based mechanisms prioritises environmental purposes. Requirements for best available science and data in risk analysis, and public participation and recourse in design and application of risk-based systems, ensures reasonable transparency and accountability.

However, Lindsay and Riebl also call for caution:

*[T]he use of “streamed” risk-based categories of assessment and/or monitoring and compliance will tend to diminish or marginalise environmental questions in those circumstances where lower risk formulations are applied. In this respect, use of the “risk frame” to pursue an economic agenda (eg reducing the regulatory burden on business) tends, in effect, to weaken or remove environmental considerations in regulatory decision-making and action.*⁴

The Draft Report urges a “fundamental rethink” of native vegetation and biodiversity laws to make the application of such laws more “risk-based”. EDOA considers that many biodiversity laws are *already* strongly risk-based, with defensible, scientifically-based methodologies to guide their application. We are concerned that the Commission’s draft recommendations seek to ‘streamline’ these assessments to the detriment of environmental outcomes.

¹ Sean.L Maxwell, Richard A. Fuller, Thomas M. Brooks, James. E.M Watson ‘Biodiversity: The Ravages of Guns, Nets and Bulldozers’ (August 2016) 536 *Nature* 7615, 143-145. The authors will present a full paper exploring this issue at the upcoming IUCN Convention in September 2016.

² Maron, M and C Catterall. Open Letter to AgForce. 16 August 2016. Available at www.smh.com.au/cgstatic/gqtoyx/lettertoagforce.pdf

³ Lindsay, B and C Riebl. “Risk-based regulation’ in environmental governance” (2013) 30 EPLJ 452 at 465-466

⁴ Lindsay, B and C Riebl. “Risk-based regulation’ in environmental governance” (2013) 30 EPLJ 452 at 465

For example, in Queensland the *Vegetation Management Act 1999* (**VMA**) regulates vegetation clearing in non-urban areas. The VMA provides for different levels of regulation of vegetation clearing depending on the level of vulnerability of vegetation species or ecosystems in a biodiversity area. The level of regulation that applies is based on a risk assessment that has been undertaken in drafting the regulatory framework, based on the regional ecosystem applicable.

For clearing in 'low risk' areas or impacting 'low risk' vegetation types, self-assessable codes apply which means that clearers are not required to get permits to undertake the clearing as long as they comply with the relevant codes. For some areas or vegetation types, no clearing codes or permits apply due to the perceived lack of risk from clearing in those areas. For clearing of high-risk protected plants, more stringent requirements apply including the requirement to obtain a permit to clear vegetation.

Equally, protections under the *Nature Conservation Act 1992* (Qld) (**NCA**) are based on a risk assessment of impacts and the degree of protection needed for specially protected plants mapped across Queensland as being in 'high risk' areas. The object of the NCA is '*The conservation of nature ... by an integrated and comprehensive conservation strategy for the whole of the State*', with identified risks triggering additional assessment requirements.

In New South Wales, the *Native Vegetation Act* is currently supported by a world class Environmental Outcomes Assessment Methodology designed to apply a risk-weighted analysis to proposed vegetation clearing. In addition, the NSW Act provides two significant concessions that enable lower-risk vegetation clearing. First, areas that have been previously cleared at a baseline date can be re-cleared as 'unprotected regrowth'. Second, the Act and regulations permit clearing without any approval for a wide range of Routine Agricultural Management Activities (**RAMAs**) such as clearing for farm infrastructure, eradication of weeds and pests, invasive native species, stock fodder and risks to health and safety. Furthermore, NSW is misapplying a risk based approach. Only genuinely *low* risk clearing activities should be permitted under self-assessable codes. Endangered ecological communities are by definition communities at very high risk of extinction, so it is completely inappropriate and contrary to the logic of codes to allow code-based clearing of EECs.

The reforms proposed in the NSW Local Land Services Amendment Bill 2016 seek to replace this risk-based approach with a suite of expanded exemptions, self-assessable codes, and discretions able to be exercised without reference to environmental baselines, aims or targets. The 'single-scientific method' promoted by the reforms is not binding on all consent authorities and calculated offset requirements may be reduced on the basis of factors other than environmental outcomes. EDOA is concerned that the expanded codes will enable a return to broadscale land-clearing; increase the difficulty and cost of curbing greenhouse gas emissions; and that the removal of the existing 'maintain or improve' standard (for biodiversity, soil and water quality and salinity impacts) fails to recognise the historic loss and degradation of ecosystems, soil and watercourses. As the *State of the Environment Report 2011* headlines note:⁵

- 'Pressures of past human activities and recent droughts are affecting our inland water systems.'
- 'Australia's land environment is threatened by widespread pressures.'
- Threats to our soil, including acidification, erosion and the loss of soil carbon, will increasingly affect Australia's agriculture unless carefully managed.'
- 'Our unique biodiversity is in decline, and new approaches will be needed to prevent accelerating decline in many species.'

In summary, it is EDOA's view that a risk-based approach to the application of biodiversity laws will only be appropriate where methodologies are well-designed and measured against clear objectives, such as ESD, "improve or maintain" or "no net loss". To be evidence-based, such assessments must necessarily balance the complexities of ecological science, and require adequate resources to ensure tools relied upon (such as landscape and property scale mapping) are accurate and up to date. It is also essential that the decision-makers responsible for assessing risks have the resources and expertise to conduct the assessments.

For example, the current reforms proposed in NSW will make Local Land Services responsible for most vegetation clearing approvals, despite the recommendation of the Independent Biodiversity Legislation Review Panel that clearing proposals be approved as part of an integrated planning assessment. The lack of expertise within Local Land Services, the extent of discretion allowed (see below) and ongoing concerns regarding the scientific rigour of mapping will serve to compromise the integrity and consistency of assessments.

⁵ See *State of the Environment 2011 - In brief*, State of the Environment 2011 Committee, Australian Government, p 9.

The [Wild Island mapping](#) exercise in Tasmania provides a good example of mapping developed on the basis of biodiversity requirements, including habitat connectivity, rather than merely vegetation types and exploitation potential.

Consistent approach

The Draft Report states (at p128):

It is also important that risk assessment methods apply equally to all landholders, with the same factors considered regardless of the purpose of the intended action. For example, it is not good practice to apply different rules to land clearing for the mining, petroleum, geothermal and exploration activities than would apply if the same clearing were proposed for agricultural purposes.

In contrast, at p140 the Draft Report observes:

Many of the burdens imposed by other environmental protection regulations have arisen because those regulations do sufficiently take account of the different circumstances faced by businesses in particular industries or locations. Rigid application of standards (especially standards that are necessary and efficient in more densely populated areas, but that are neither of those things on an isolated farm) can impose a significant and unnecessary burden on farm businesses, without contributing to better outcomes for the environment.

To avoid this, regulations need to be designed with sufficient flexibility so that they only apply where environmental values cannot be preserved and protected in other ways, and where the benefits of protection outweigh the costs.

EDO believes that a scientifically rigorous risk-assessment methodology, applied consistently to all land uses and land tenures, is the best approach to achieve economically and ecologically sustainable outcomes. Such an approach can direct regulatory effort to where it is needed, on the basis of risks to biodiversity and opportunities to avoid impacts, and identify areas where non-regulatory approaches will be most effective.

Examples

We wish to comment briefly on two examples used in the Draft Report to illustrate difficulties with the current regulatory framework.

One example provided in Box 1 of the Draft Report cites the experience of a landholder seeking to clear land identified as potential habitat for seven species listed as threatened under the EPBC Act. While cited in the Draft Report as an example of 'excessive burdens of regulation', we consider that the outcome demonstrates the appropriate application of a risk-based assessment: the risk of impacts on a threatened species were identified, assessed against relevant criteria and determined to be low enough to allow the clearing to proceed.

A further example at Box 3 (p16) describes the frustration of a well-meaning farmer's efforts to create a wetland to extend the period in which frogs and migratory birds occupied his property. There is no evidence provided in the example as to the environmental benefits of the project – it is assumed to be advantageous because, at a property scale, it resulted in an increased abundance of species. However, there is no discussion of the off-site impacts of manipulating the natural water cycle – given the potential impacts on ecological processes, it is appropriate that the proposal was rigorously assessed and regulated. The fact that it was ultimately approved as a 'pilot' is again evidence of a robust risk-assessment system that requires further information regarding the potential long-term impacts before committing to long term changes to natural processes.

Landscape scale

Regional and landscape scale perspectives are fundamental to the design of most biodiversity laws. Regional population, habitat abundance and geographic range will determine the threat category assigned to a threatened species or ecological community. Similarly, the assessment process triggered by a particular category of land use will be assigned on the basis of the risks posed to potentially impacted natural values, based on the scarcity of those values at a landscape scale.

For example, regional ecosystems maps, developed through extensive survey, mapping and monitoring undertaken by the Queensland Herbarium, provide the landscape-wide understanding of risks and impacts of clearing vegetation within each regional ecosystem that determine assessment scale under the *Vegetation*

Management Act 1999 (Qld). Assessment of the proposed clearing must be undertaken at a property scale, with the impacts considered at a broader scale.

A suggestion that “assessments” should be undertaken at a landscape scale, rather than a property scale, ignores the landscape assessment that already underpins the requirement for a property assessment.

As outlined in our initial submission on the Issues Paper, EDOA encourages greater use of strategic, landscape-scale planning to better address cumulative impacts. Landscape / bioregional context is also critical for the implementation of rigorous offsets schemes that actively seek to avoid impacts and improve landscape scale outcomes, rather than driving incremental loss.

In this context, we are concerned that the revised Biocertification scheme for large areas of land, proposed as part of the NSW package of Biodiversity reforms, removes the requirement to ‘maintain or improve environmental outcomes’. Instead, it applies the less-rigorous Biodiversity Assessment Methodology and replaces the current positive test (improve or maintain) with a negative one (avoid ‘serious and irreversible’ environmental outcomes – these are not yet defined). Removing the ‘improve or maintain’ test does not serve the stated aim of the reforms to preserve biodiversity and ecological integrity at regional and State scales.

As advocated in the Dr Allan Hawke’s review of the EPBC Act, greater reliance on strategic planning must be supported by efforts to strengthen the process for creating scientifically robust plans (including specifying mandatory requirements, achieving an “improve or maintain” objective, and audit and review requirements).

Exemptions

Inconsistencies in on-ground implementation, and broad exemptions and discretions for many agricultural activities, frequently undermine the achievement of landscape scale protection of biodiversity. It is our view that agricultural activities are not unduly hampered by current laws and, in fact, the application of vegetation clearing restrictions should be applied more rigorously to those activities to ensure healthy productive landscapes and catchments.

For example, many vegetation clearing laws provide exemptions for clearing associated with managing fire hazards, clearing of regrowth, maintenance of fence-lines and infrastructure.⁶ Under the *Nature Conservation Act 1992* (Qld), protected plants may be taken by grazing stock and, in some circumstances, harvested for fodder.

In Tasmania, the broadscale clearing restrictions on private land (primarily directed at clearing on rural properties) were intended to commence on 1 January 2015, pursuant to a commitment under the Regional Forest Agreement. The restrictions have been deferred three times and will now not commence until 1 July 2017.⁷ Further exemptions apply through the planning system. The draft Natural Assets Code, which requires discretionary planning permits for clearing of priority vegetation (including threatened species habitat) or any works within streamside reserves or in future coastal refugia areas, is not intended to apply in the Agriculture Zone. In all other zones, clearing of priority vegetation for pasture, crop production, vineyards or orchards is exempt from the Code.⁸ Land that is suitable for such agricultural uses is often rich in biodiversity⁹ and its exemption from consideration against the Natural Assets Code compromises landscape scale protection.

Biodiversity reforms in NSW will embed the existing exemptions and broad discretions for State Significant Development projects and the exclusion of vulnerable ecological communities from the definition of threatened species. This is despite the fact that the NSW Government cannot estimate how much clearing already occurs under the current range of exemptions.¹⁰

Sugar cane growers and cattle grazers within catchments draining into the Great Barrier Reef are also exempt from the requirement to obtain an environmental authority under s.426 of the *Environmental Protection Act 1994* (Qld). These activities are subject to some restrictions regarding fertiliser use to reduce nutrient runoff, but these have not been enforced since enactment, with voluntary best practice management being promoted

⁶ For example, Regulation 4, *Forest Practices Regulations 2007* (Tas),

⁷ See <http://www.stategrowth.tas.gov.au/forestry/native-forest>

⁸ Draft State Planning Provisions, C7.0 - Natural Assets Code. Available at www.planning.tas.gov.au/planning_our_future/draft_state_planning_provisions

⁹ Sean.L Maxwell, Richard A. Fuller, Thomas M. Brooks, James. E.M Watson ‘Biodiversity: The Ravages of Guns, Nets and Bulldozers’ (August 2016) 536 *Nature* 7615, 146.

¹⁰ The *Regulatory Impact Statement (RIS)* produced for the *Review of the Native Vegetation Regulation* in 2012 stated that “it is very difficult to determine the number of times that clearing is undertaken under a RAMA. The *Native Vegetation Report card* does not report on activities exempted or excluded from the Act”. *Regulatory Impact Statement*, 2012, p11.

instead. Few other impacts of the activities are considered in environmental assessment of the activities despite potential downstream impacts on the World Heritage Great Barrier Reef.

More detailed comments regarding exemptions and discretions operating, or proposed, in Queensland and New South Wales are set out in the submissions listed on page 1.

Balancing economic, social and environmental factors

As with the other components of draft recommendation 3.1, we consider the Commission's concern regarding lack of balance to be misplaced. The majority of environmental laws across all Australian jurisdictions already provide for economic, social and environmental matters to be considered.¹¹

The Draft Report raises concerns regarding the implementation of this balancing act, stating:

In other cases, assessing the effectiveness of regulation was difficult because the objectives are unclear or conflicting. Areas of particular concern are land use and environmental regulation. For example, some states' native vegetation laws outline social and economic interests alongside environmental interests, but also aim to improve native vegetation (with an absence of guidance on how decision makers should weigh the objectives).

EDO has also repeatedly raised concerns regarding the lack of a clear hierarchy where decision-makers are required to have regard to economic, social and environmental considerations. However, it is our experience that, in the absence of a statutory hierarchy, greater weight is regularly given to economic and social concerns. There are a range of regulations where decision-makers are explicitly invited to override environmental protections in favour of agricultural or other economic outcomes.

For example, Tasmania's *Permanent Native Forest Estate Policy* provides that regional retention levels and property clearing and conversion limits will not apply to clearing for "proposals demonstrative substantial public benefit." Substantial public benefit is determined by the Resources Minister on the basis of a socio-economic analysis.¹²

In many States, projects considered to have significant socio-economic benefits can be assessed as major projects and are generally not subject to existing biodiversity laws.¹³

Agricultural productivity, proportionality and regulatory costs are relevant metrics to be considered in determining the effectiveness of a regulatory regime. However, they must not be the only, or even the fundamental, considerations.

The reports outlined above, particularly the 2014-2015 SLATS report for Queensland, demonstrate that current vegetation clearance laws are not fulfilling the broader environmental objectives. Instead, authorised land clearing in Australia is driving biodiversity loss, and doing so at an accelerated rate. This calls into question any conclusion that the current regulatory frameworks are unduly weighted in favour of environmental outcomes.

Our initial submissions outlined our view that the 'effectiveness' of environmental regulation must be measured in terms of its success in delivering ecologically sustainable development – including long-term biodiversity conservation, improved resilience of natural systems against changing climatic conditions and natural resource management. The concept of ecologically sustainable development, already central to most environmental laws, necessarily seeks to balance economic, social and environmental factors. The effective implementation of the objective of ESD would recognise that ultimate regard must be had to the fundamental importance of long-term environmental health to sustaining economic and social wellbeing.

¹¹ See, for example, s.3A of the EPBC Act.

¹² Clause 4.8, Permanent Native Forest Estate Policy – updated June 2016. Available at http://www.stategrowth.tas.gov.au/_data/assets/pdf_file/0006/136563/Final_Approved_PNFEP_Policy_For_Website.pdf

¹³ For example, Coordinated Projects under the *State Development and Public Works Organisation Act 1971* (Qld), State Significant Developments under the *Environmental Planning and Assessment Act 1979* (NSW) or Projects of State Significance under the *State Policies and Projects Act 1993* (Tas)

COMMISSION'S DRAFT RECOMMENDATION 3.2

The Australian, state and territory governments should continue to develop market-based approaches to native vegetation and biodiversity conservation. Where the community is seeking particular environmental outcomes, governments could achieve them by buying environmental services (such as native vegetation retention and management) from existing landholders

EDOA continues to support the development of market-based mechanisms that reward good environmental stewardship, providing the mechanisms are subject to rigorous methodologies, well-monitored and regularly audited to ensure investments were delivering ecological outcomes.

In addition to the existing statutory and market mechanisms identified in our initial submission, we note increasing international emphasis on soil carbon sequestration as a contributor to global emission reductions.¹⁴ Increased soil carbon also has indirect benefits in improving the water-holding capacity and nutrient cycling, leading to higher agricultural productivity. We therefore encourage the government to augment existing soil carbon Emissions Reduction Fund methodology and provide primary industry with incentives for avoiding soil carbon loss through erosion by maintaining ground cover.¹⁵

We also strongly support incentives and stewardship payments to rural landholders to conserve and protect environmental values, however such payments are not a substitute for a rigorous legal framework designed to avoid biodiversity decline. As Pannell and Roberts have identified, small grants and voluntary conservation efforts “are not suitable in all cases as they depend on the existence of win-win management options, which are not always available.”¹⁶ Clear, robust biodiversity policies are essential to address situations where a win-win is not available, and biodiversity demands must prevail. Clear policies will also ensure that payments are directed to actions that would not otherwise have occurred.

Furthermore, the success of compensated private conservation measures (such as covenants) relies heavily on monitoring to ensure that conservation commitments are being met.¹⁷ Government covenant programmes should ensure that adequate resources are available to assist landowners with land management responsibilities, and to monitor their compliance.

We are however, concerned about an over-reliance on market mechanisms to deliver environmental outcomes for biodiversity. For example, the proposed NSW biodiversity laws are heavily dependent on offsetting to deliver biodiversity outcomes, but the scheme is unlikely to achieve the desired outcomes as the standards for offsetting have been considerably weakened and are not supported by ecological principles and evidence.¹⁸

COMMISSION'S DRAFT RECOMMENDATION 3.3

The Australian, state and territory governments should review the way they engage with landholders about environmental regulations, and make necessary changes so that landholders are supported to understand the environmental regulations that affect them, and the actions required under those regulations. This would be facilitated by:

- recognising and recruiting the efforts and expertise of landholders and community-based natural resource management organisations
- building the capability of, and landholders' trust in, environmental regulators

The Draft Report notes (at p136):

Good regulation is clear, simple, and practical for users. However, as many landholders have argued, native vegetation and biodiversity conservation regulations are so complex that understanding them is neither simple nor practical.

The Draft Report further stresses the importance of clear communication in relation to risk-assessments, noting the complexity of the methodologies and the multitude of factors dictating the application of relevant laws.

¹⁴ See, for example, Koch et al. 2015. “4 per 1000 - Soil Carbon to Mitigate Climate Change”. *Global Policy*. Available at <http://www.globalpolicyjournal.com/blog/24/11/2015/4-1000-soil-carbon-mitigate-climate-change>

¹⁵ Interview with S Orgill, *Footprints News*, 15 August 2016. See also <https://theconversation.com/farming-in-2050-storing-carbon-could-help-meet-australias-climate-goals-54899>

¹⁶ Pannell D, and A Roberts. 2015. “Public goods and externalities: Agri-environmental Policy Measures in Australia” OECD Food, Agriculture and Fisheries Paper. No 80. Available at <http://www.oecd-ilibrary.org/docserver/download/5js08hx1btlw.pdf>

¹⁷ See, for example, Hardy et al. 2016. “Exploring the Permanence of Conservation Covenants”. *Conservation Letters* 2016, pp1–10

¹⁸ See: http://www.edonsw.org.au/2016_nsw_biodiversity_reforms_offsets_and_ecologically_sustainable_development

EDOA strongly supports efforts to help rural landholders to understand environmental regulations. EDO offices in all States and Territories undertake extensive community outreach work to assist rural communities to understand their environmental obligations.

While the drafting of regulations can be improved in many instances, environmental regulation is necessarily complex. Therefore efforts should focus not on reducing the regulatory burden, but on helping those affected by the laws to understand why the laws are necessary and how to comply with them most efficiently. Many of the examples provided throughout the Draft Report describe frustrations that could have been reduced had the farmer received clear advice regarding permit obligations, information requirements and expected timeframes for decisions.

The value of Landcare and Natural Resource Management offices cannot be understated. As expressed in our initial submission, we strongly urge the government to increase funding to those organisations in recognition of their role in educating farmers and implementing cost-effective measures to improve farm productivity and minimise environmental impacts.

We also strongly support the recommendation to increase the capacity of environmental regulators. Responsible agencies are regularly subject to funding cuts, amalgamations and competing priorities, under-resourcing and staff turnover. As a result, there are often limited resources for extension work and regional placements, on-ground surveys to improve mapping and policy development to improve integration of services. Critically, there are also limited resources for monitoring and enforcement activities.

Implementing a robust system of environmental regulation will only be possible if resources are available within agencies to dedicate time to education, building internal expertise, monitoring and auditing. Governments must also be committed to making available adequate resources to support strong enforcement actions, including training officers in the collection of admissible evidence.

The need for environmental data, ‘ecosystem services’ and environmental accounts

Reliable data on environmental assets and their condition is an important input into land-use planning, development assessment and natural resource management, including their interface with agriculture. Reliable environmental data is also critical to assessing the role of regulation in avoiding long-term degradation of environmental assets. The Commission’s Draft Report does not give adequate attention to either of these issues.

As the former COAG Reform Council noted in the context of strategic planning, there is a need for ‘improving project and cost-benefit analysis frameworks so they take better account of externalities and do not unduly discount future benefits.’¹⁹ These comments apply equally to regional planning and agriculture as they do to urban planning. Improving environmental data and integrating it into decision-making can address these gaps. According to Australia’s most recent *State of the Environment Report 2011*, ‘Australia is positioned for a revolution in environmental monitoring and reporting.’²⁰ However, ‘Creating and using systems that allow efficient access to environmental information remain a great national-scale challenge.’²¹

To better integrate environmental factors into decision making at all levels, including agricultural productivity, the Commission should recommend:

- investing in a program to identify and gather data on ‘ecosystem services’ (benefits to humans provided by nature) – to report on and raise awareness of the importance of ecosystems and their services, and emphasising the need to maintain and restore ecosystem health for long-term productivity;
- establishing a system of national and regional environmental accounts – to assess progress against baselines and targets. These accounts should monitor the extent, condition and trends in natural resources and environmental assets including biodiversity, native vegetation, carbon storage, soil and water quality.

We briefly explore these two recommendations in more detail below.

¹⁹ See COAG Reform Council, *Review of capital city strategic planning systems* (Dec. 2011), ‘Overview’, p 2, available at: <http://www.coagreformcouncil.gov.au/reports/cities.cfm>.

²⁰ See Report to the Australian Government, *State of the Environment 2011*, ‘Future reporting’, <http://www.environment.gov.au/soe/2011/report/future-reporting.html>. These include more intelligent monitoring, increased standardisation and data-sharing, better data management and modelling, and national benchmarks for environmental and sustainability indicators.

²¹ Report to the Australian Government, *State of the Environment 2011*, ‘Future reporting’.

Ecosystem services

The land management section of the *State of the Environment Report 2011* highlights an under-investment in land management, research and development, knowledge and information systems in Australia.²² For the reasons noted above, many countries now recognise the need to improve data on ecosystem services and integrate it into decision-making:

Biodiversity is the foundation upon which humans derive benefits called ecosystem services. For example, natural systems such as wetlands, free-flowing rivers, forests and grasslands provide services such as water purification, storm and flood protection, air pollution mitigation and recreational opportunities that benefit human well-being...

*Estimating the value of ecosystem services can reveal social costs or benefits that otherwise would remain hidden. Once identified and understood, these values can be considered and accounted for in the policy and decision-making process.*²³

In the United Kingdom, United States, Canada and elsewhere, agencies are integrating ecosystem services into strategic planning, assessment and land management programs:

- In 2013 the UK Government issued guidance for policy and decision makers on using an ecosystems approach and valuing ecosystem services.²⁴
- In 2015 the US President issued a directive to all federal agencies to develop ecosystem services frameworks in forward planning.²⁵
- The Ontario Biodiversity Council has set goals and targets to implement ecosystem services approaches by 2020.²⁶

Australian expert groups including the IUCN and Wentworth Group of Scientists have also recently developed relevant tools and protocols.²⁷

The Australian Government should invest in a program to identify and gather data on ecosystem services, functions, values and trends. This should include a 'national ecosystems assessment' as the UK has done.²⁸ While the five-yearly *State of the Environment (SOE)* report gives a high-level 'snapshot', it does not have a focus on ecosystem services, and struggles with the limited and inconsistent data available across Australia (as cited above).

Environmental accounts

To ensure regional planning processes and decisions are informed and evidence-based, we also recommend the Australian Government accelerate work on adopting national and regional *environmental accounts*, in collaboration with state and territory governments. This does not mean simplifying everything to a 'dollar value', as this is not always practical or appropriate. Nevertheless, a number of expert reviews have recommended establishing a set of National Environmental Accounts that track the extent, quality and trend of natural resources such as native vegetation, water, soil and biodiversity.

In particular, we note the *Accounting for Nature* model of the Wentworth Group of Concerned Scientists, and recent pilots in partnership with natural resource management agencies.²⁹ In a different context, the ABS and BOM are currently adapting international standards for environmental-economic accounts.³⁰ However, it is unclear the extent to which this work is being prioritised or integrated into regulation and policy-making.

²² *State of the Environment 2011 - In brief*, State of the Environment 2011 Committee, Australian Government, p 27.

²³ See <http://sobr.ca/report/>, *Indicators report – State of Ontario's Biodiversity 2015*, p 138.

²⁴ See: <https://www.gov.uk/guidance/ecosystems-services>.

²⁵ See: <https://www.whitehouse.gov/blog/2015/10/07/incorporating-natural-infrastructure-and-ecosystem-services-federal-decision-making>.

²⁶ See <http://sobr.ca/report/>, Summary report – State of Biodiversity 2015 (Target 14).

²⁷ See for example: <http://aciucn.org.au/index.php/publications/2015-valuing-nature/>; and <http://wentworthgroup.org/2015/06/blueprint-paper-1-using-markets-to-protect-natural-capital/2015/>.

²⁸ See: <http://uknea.unep-wcmc.org/>.

²⁹ See Wentworth Group of Concerned Scientists, *Accounting for Nature* (2008); and *Accounting for Nature – Quick Guide: Guidelines for Constructing Regional Scale Environmental Asset Condition Accounts* (2013) at www.wentworthgroup.org. See also Dr. A. Hawke, *Report of the Independent Review of the EPBC Act 1999* (2009), Chapter 19 and recommendation 67. See further National Sustainability Council, *Sustainable Australia Report 2013*, 'Sustainability Indicators for Australia'.

³⁰ See for example Bureau of Meteorology (BOM), *Guide to Environmental Accounting in Australia*, at <http://www.bom.gov.au/environment/activities/accounts.shtml>. See also Australian Bureau of Statistics, *4655.0 - Australian Environmental-Economic Accounts, 2015*, at www.abs.gov.au.

Regulation of agriculture must address future challenges of climate change

The Draft Report does not sufficiently consider future challenges that agricultural regulation must address, adapt and respond to, consistent with the need to 'ensure that industry develops in a way that is ecologically sustainable' (*Productivity Commission Act 1998*, s. 8(1)(i)). In particular, future regulation will need to embed climate change mitigation and adaptation.

The Draft Report contains only three references to greenhouse gas emissions reduction and climate change impacts, noting briefly that:

- climate change and other factors will limit increases in agricultural land area (p 58);
- 'Land clearing contributes significantly to carbon emissions...' (p 135); and
- the ability of biofuel production to reduce carbon emissions is limited (p 336).

Further, the Draft Report does not sufficiently consider the adverse impacts of its proposals to remove or reduce regulation, or the co-benefits of existing regulation that could be improved and built on. For example, native vegetation laws significantly contribute to carbon storage and greenhouse mitigation objectives and targets.³¹ Other examples of co-benefits are discussed at p 17 of our submission on the Issues Paper.

We recommend the Commission draw on evidence in the Climate Council's recent paper, *On the Frontline: Climate Change and Rural Communities*, to inform its final recommendations.

In summary, the Climate Council report's four key findings (extracted in **Attachment 1**) are:

1. Rural and regional communities are disproportionately affected by the impacts of climate change.
2. The systemic disadvantages experienced by rural and regional communities over those in urban areas are likely to worsen if climate change continues unabated.
3. Rural and regional communities are already adapting to the impacts of climate change but there are limits and costs.
4. While rural and regional communities are on the frontline of climate change impacts, tackling climate change also provides these communities with many opportunities.

These findings build on the Climate Council's earlier report outlining the risks to food security and agricultural productivity posed by climate change.³²

We urge the Commission to include recommendations in its final report ensuring that agricultural regulation and policy embeds climate change responses, including emissions reduction and adaptation, to promote sustainable livelihoods, communities and environments.

Thank you for the opportunity to comment on the Draft Report. Please do not hesitate to contact me if you would like to discuss either of our submissions to this Inquiry.

Yours sincerely,



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³¹ See for example, NSW EPA, *New South Wales State of the Environment 2015*, p 38

³² Climate Council of Australia. 2016. *Feeding a Hungry Nation: Climate change, Food and Farming in Australia*. Available at www.climatecouncil.org.au

ATTACHMENT 1: KEY FINDINGS OF CLIMATE COUNCIL REPORT:

On the Frontline: Climate Change and Rural Communities (full report available at: <http://www.climatecouncil.org.au/ruralreport>)

1. Rural and regional communities are disproportionately affected by the impacts of climate change.

- Climate change is worsening extreme weather events such as bushfires and drought and rural and regional communities will continue to be disproportionately affected.
- Many agricultural businesses surveyed have used financial reserves and/or have taken on increased debt in response to extreme weather events.
- Australia's agricultural sector is showing signs of decreasing capacity and faltering productivity gains and the resilience of some rural industries is under threat.

2. The systemic disadvantages experienced by rural and regional communities over those in urban areas are likely to worsen if climate change continues unabated.

- Rural and regional communities have already seen a significant reduction in population that has prompted further losses in services and unemployment. Climate change will further exacerbate these stresses.
- Strong climate action is required to protect rural and regional communities from the worsening impacts.

3. Rural and regional communities are already adapting to the impacts of climate change but there are limits and costs.

- Adaptation to cope with a changing climate may be relatively incremental, such as changing sowing and harvesting dates, or switching to new breeds of livestock and new varieties of crops.
- More substantial adaptation options may involve changing production systems (eg. from cropping to grazing), or relocating to more suitable areas.
- The more transformational adaptive changes may be risky and expensive, especially for individual farmers.
- As the climate continues to change, adaptation will become increasingly challenging.

4. While rural and regional communities are on the frontline of climate change impacts, tackling climate change also provides these communities with many opportunities.

- In Australia, rural areas receive around 30 - 40% of the total investment in renewables, valued at \$1-2 billion per year.
- Renewable energy projects bring jobs and investment into rural and regional communities. Delivering half of our electricity from renewable sources by 2050 would create more than 28,000 jobs.
- The transition to clean energy will also reduce the health burden of burning coal, which is almost entirely borne by rural and regional areas, e.g. the Hunter and Latrobe valleys.
- Farmers can build the climate resilience of their farms by adding additional revenue streams, such as by hosting wind turbines and other renewable energy projects. Across Australia, approximately \$20.6 million is paid annually in lease payments to farmers and landholders hosting wind turbines.
- Community funds and additional rate revenue for rural and regional areas from renewable energy can be used to improve public services such as schools and local infrastructure.
- Renewable energy can reduce electricity costs for rural and remote communities, who traditionally pay much higher prices than their urban counterparts. It also offers independence from the grid with several towns now racing to be the first to operate on 100% renewable energy.